



BioEnergy Producers Association

Clean Technology for Renewable Energy

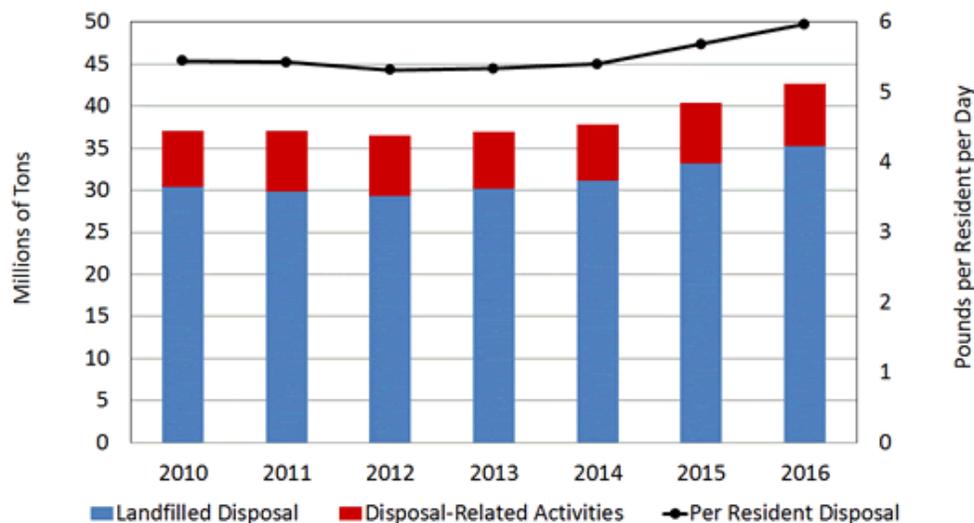
Remarks by Jim Stewart
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In attempting to meet AB 341 goal of 75% reduction of waste to landfills by 2020, CalRecycle has been clinging to a narrow policy of waste reduction, recycling and composting, and has virtually ignored the potential of post-recycled municipal solid waste (MSW) as a feedstock for the production of renewable fuels, electricity and chemicals.

As a result, during the eight years leading from 2010 to 2017, the state's recycling rate declined from 49% to 42%, the lowest rate since the statewide 75 recycling goal was established in 2011.

Millions of Tons of MSW Landfilled in California							
2010	2011	2012	2013	2014	2015	2016	2017
30.4	29.9	29.3	30.2	31.2	33.2	35.2	37.8
California's Recycling Rate							
49%	49%	50%	50%	50%	47%	44%	42%

Over the same period, the volume of post-recycled MSW being placed in landfills or exported for landfilling increased from 30.4 million tons annually to 37.8 million tons. To calculate California's recycling rate, CalRecycle added to that 6.6 million tons of "disposal-related" materials, bringing total disposal to 44.4 million tons.



With California's population at 39.5 million residents and using AB 341's measurement system, this results in a per resident disposal rate of 6.2 pounds/resident/day. As the state's recycling rate has declined to 42%, down from 47% in 2015, achieving 75 percent recycling by 2020 is an impossibility. Until 2015, the state's recycling rate had remained essentially unchanged at approximately 50% since 2010. By 2020, it is estimated that California will be generating 80 million tons of solid waste annually.

CalRecycle's policies have been working against its own stated goals.

Further, in 2017, California exported 8.1 million tons of recyclable materials to China. In July 2018, China declared its intent to ban all recyclable material imports by 2020, compounding the problem.

Theoretically, from those 37.8 million tons of waste, conversion technologies could produce at least 1.6 billion gallons of advanced renewable fuel, and by gasifying the waste and upgrading the synthesis gas before it goes into a landfill, they could also provide a major source of biomethane (renewable natural gas) for injection into the state's pipelines.

California is producing very little renewable diesel or cellulosic ethanol. MSW, in the form of post-recycled waste, is one of the state's best potential sources for the production of biomethane (renewable natural gas).

California law (PRC 40180) defines recycling, as *"the process of collecting, sorting, cleansing, treating, and reconstituting of materials that would otherwise become solid waste, and returning them to the economic mainstream in the form of raw material for new, reused, or reconstituted products, which meet the quality standards necessary to be used in the marketplace."*

In recent years, CalRecycle has virtually ignored the potential for using recyclables as raw materials for the production of new products—such as biofuels or renewable natural gas—in its implementation of AB 341 and other programs

According to CalRecycle, "In order for California to reach its statewide recycling goal of **75%** by 2020, the state must reduce, recycle, or compost an additional 24 million tons of material currently going to landfills every year." More than half of the solid waste that is currently being landfilled would need to be source reduced, recycled, or composted.

California's 2020 goal of 75% recycling is unachievable, and without new technologies for waste diversion, it may never be.

Here are some of the roadblocks that have been in statute for at least two decades:

- A definition of gasification that is universally acknowledged as scientifically inaccurate.

- A definition that requires the entire manufacturing process, including the bioenergy production step, to have zero emissions. How many refineries and other industrial sites would be in operation today if they had to have zero emissions?
- In statute, conversion technologies, including low temperature technologies, remain generally equated with incineration.
- MSW, when used to produce renewable energy, does not qualify as landfill diversion.

Without diversion credit to comply with their recycling mandates, jurisdictions will be reluctant to devote their waste streams to bioenergy production.

As far back as 2010, the California Air Resources Board stated that its #1 solution for meeting the GHG reduction goals of California's Low Carbon Fuel Standard was to *"increase use of biofuels from waste materials."*

To meet its LCFS goals, *nine years ago*, ARB projected the need for *24 new commercial scale advanced biofuels facilities in California by 2020.*

As far as MSW is concerned, almost nothing has been done.

There is the parallel challenge to the efforts of the BioEnergy Producers Association on behalf of conversion technologies. The Coalition for Renewable Natural Gas is seeking to put in place regulations that will allow the injection of renewable natural gas into the state's pipelines. Interdicting MSW before it enters a landfill and creating a syngas that can be upgraded for pipeline injection as RNG is one of the most effective pathways for meeting the state's mandate of producing 50% of its electricity from RNG by 2030. At the moment, regulations prevent technology providers, who produce RNG through the gasification of MSW, from having access to the state's pipelines to deliver it. We expect that revised regulations enabling this important step will be published during 2019.

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